

Contributors to This Issue

B. A. AULD, B.A.Se. (EE), 1946, University of British Columbia; MS, 1949, and Ph.D. (EE), 1952, Stanford University; Electrical and Musical Industries Ltd., London, 1953–1955; staff, University of British Columbia, 1955–1958; research staff, Stanford University, 1958—; Visiting Fellow, Bell Telephone Laboratories, 1963–1964. His work has related to the theory of microwave circuits and interactions of microwave fields with spin waves and acoustic waves.

VACLAV E. BENEŠ, A.B., 1950, Harvard College; M.A. and Ph.D., 1953, Princeton University; Bell Telephone Laboratories, 1953—. Mr. Beneš has been engaged in mathematical research on stochastic processes, traffic theory, and servomechanisms. In 1959–60 he was visiting lecturer in mathematics at Dartmouth College. He is the author of *General Stochastic Processes in the Theory of Queues* (Addison-Wesley, 1963). Member, American Mathematical Society, Association for Symbolic Logic, Institute of Mathematical Statistics, SIAM, Mind Association and Phi Beta Kappa.

TA-SHING CHU, B.S., 1955, National Taiwan University; M.S., 1957, Ph.D., 1960, Ohio State University; Bell Telephone Laboratories, 1963—. He has worked in the field of electromagnetics with emphasis on surface waves and microwave antennas. At present he is working on optical and infrared wave propagation through the atmosphere. Member, IEEE, American Physical Society, Sigma Xi, and Pi Mu Epsilon.

HAROLD S. EDWARDS, B.S.E.E., 1925, Yale University; The Southern New England Telephone Company, 1925–1946; American Telephone and Telegraph Company, 1946—. At the Southern New England Telephone Company he was concerned with various assignments in the Plant and Engineering Departments. At the present time he is Plant Facilities Design Engineer, with responsibilities for the design of the outside plant subscriber network as well as methods and administration of the outside plant engineering job.

WALTER J. C. GRANT, A.B., 1951, M.A., 1952, Boston College; B.S., 1958, Ph.D., 1962, Massachusetts Institute of Technology; Bell Telephone Laboratories, 1962—. He has been engaged in theoretical study of paramagnetic and electro-optic solid-state devices. Member, American Physical Society and Sigma Xi.

HENRY Z. HARDAWAY, B.S.M.E., 1940, University of Iowa; Southern Bell Telephone and Telegraph Company, 1940-42; Bell Telephone Laboratories, 1942—. He was first engaged in military equipment design work on airborne and submarine radar and navigational equipment. He is currently directing systems engineering studies which involve basic design concepts of the outside plant exchange cable network and which have important interfaces with transmission and switching equipment. Also, he is involved in the application of operations analysis techniques to the Associated Companies' operating and engineering problems.

HERWIG KOEGLNIK, Dipl.-Ing., 1955, Dr. techn., 1958, Technische Hochschule Wien, Austria; D.Phil., 1960, Oxford University, England; Bell Telephone Laboratories, 1961—. He is engaged in optical maser research. Member, American Physical Society, IEEE, Elektrotechnischer Verein Österreichs (Austria).

IRWIN W. SANDBERG, B.E.E., 1955, M.E.E., 1956, and D.E.E., 1958, Polytechnic Institute of Brooklyn; Bell Telephone Laboratories, 1958—. He has been concerned with analysis of military systems, particularly radar systems, and with synthesis and analysis of active and time-varying networks. He is currently involved in a study of the signal-theoretic properties of nonlinear systems. Member, IEEE, SIAM, Eta Kappa Nu, Sigma Xi and Tau Beta Pi.

R. A. SEMPLAK, B.S., 1961, Monmouth College; Bell Telephone Laboratories, 1955—. He has been engaged in beyond-the-horizon radio propagation and three satellite communications projects: Project Echo, Telstar I and Telstar II. He has also participated in studies of the effects of rain on sky noise temperatures at 6-gc frequency and has recently completed an experimental study of the near-field Cassegrainian antenna. He is currently engaged in measuring the scattered radiation from various surfaces at 0.6-micron wavelength.

TZAY Y. YOUNG, B.S., 1955, National Taiwan University; M.S., 1959, University of Vermont; D.E.E., 1962, John Hopkins University;

Bell Telephone Laboratories, 1963—. He has been engaged in the investigation of the statistical extraction and detection of signals overlapping in time. Currently he is on leave from Bell Laboratories, teaching as an Assistant Professor at the Carnegie Institute of Technology. Member, IEEE, AAAS and Sigma Xi.

